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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,422	12/19/2005	Daisuke Kuroda	050316	6152
23850 7590 03/07/2008 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005				
EXAMINER				
ZHU, WEIPING				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
03/07/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,422

Applicant(s)

KURODA ET AL.

Examiner

WEIPING ZHU

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/08)
Paper No(s)/Mail Date 5/1/2007, 11/22/2006 and 5/19/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berns (US 5,503,687) in view of Speidel et al. (US 5,714,115).

With respect to claim 1, Berns ('687) discloses a method for producing a component comprising bringing a ferritic stainless steel component in contact with a gas containing nitrogen at a predetermined temperature to make the component absorb nitrogen to transform at least part of the ferritic stainless steel to austenite (claim 4 and abstract).

With respect to claim 1, Berns ('687) does not specify the melting step of producing the ferritic stainless steel and the working step of working the ferritic steel to the component as claimed. However, it would have been obvious to one of ordinary skill in the art that the method of Berns ('687) would inherently comprise both steps, because Berns ('687) teaches enriching the surface of the low-nitrogen-content stainless steel produced by an open steel smelting process with nitrogen to increase the wear resistance of the steel (col. 1, lines 5-48) and a working step will inherently be involved in shaping the stainless steel of Berns ('687) into the component of a desired shape.

With respect to claim 1, Berns ('687) does not specify the medical device for living soft tissue as claimed. Speidel et al. ('115) discloses a stainless steel medical device for living soft tissue (claim 9). It would have been obvious to one of ordinary skill in the art to use the nitrogen treated stainless steel of Berns ('687) for a medical device for living soft tissue as disclosed by Speidel et al. ('115) with expected success because the compositions and the structures of the nitrogen treated stainless steel of Berns ('687) (e.g. nitrogen treated ferritic stainless steel 18Cr-2Mo) and the stainless steel of Speidel et al. ('115) (Speidel et al. ('115), claim 9) are similar. See MPEP 2144.05 I.

With respect to claims 2 and 3, Berns ('687) does not specify the composition of the ferritic stainless steel as claimed. However, It would have been obvious to one of ordinary skill in the art that the composition of the ferritic stainless steel of Berns ('687) would meet the imitations of Fe, Cr and/or Mn and Mo and/or Ti contents as claimed, because common ferritic stainless steel grades include 18Cr-2Mo, 26Cr-1Mo, 29Cr-4Mo, and 29Cr-4Mo-2Ni.

With respect to claims 4, 5, 11 and 12, Berns ('687) discloses the treatment temperature is between 1000°C and 1200°C (abstract), which overlaps the claimed temperature ranges. A prima facie case of obviousness exists. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the claimed temperature ranges within the disclosed temperature range of Berns ('687) with expected success, because Berns ('687) discloses the same utility over the entire disclosed range.

With respect to claims 6, 7, 13, and 14, Berns ('687) discloses the nitrogen content of the nitrogen treated ferritic stainless steel is greater than or equal to 1.4% by weight (col. 2, lines 25-35 and Figure 2), which overlaps the claimed nitrogen contents. A prima facie case of obviousness exists. See MPEP 2144.05 I.

With respect to claims 8, 9, 15 and 16, Berns ('687) discloses that the nitrogen treated stainless steel has a two-phase structure of ferrite and austenite or a one phase austenitic structure (col. 1, lines 49-56).

With respect to claims 10 and 17, they are product-by-process claims. Even through product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. Berns ('687) in view of Speidel et al. ('115) discloses a medical device for living soft tissue, which reasonably appears to be only slightly different than the respective claimed products in the product-by-process claims. A rejection based on section 103 of the status is eminently fair and acceptable. See MPEP 2113.

Conclusion

2. This Office action is made non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

WZ

2/19/2008

Application Number**Application/Control No.**

10/535,422

Examiner

WEIPING ZHU

**Applicant(s)/Patent under
Reexamination**

KURODA ET AL.

Art Unit

1793